

Determining Death in Field Conditions

One of the realities of livestock production is euthanasia.

All livestock handlers face situations where animals, because of disease, injury or some other cause, must be humanely killed on-site.

Jennifer Woods, a livestock handling specialist, teaches emergency response courses on the humane handling and euthanasia of livestock during emergencies. “Determining death under field conditions can be problematic,” she says. “In the field there is no way to 100% confirm that an animal has been made insensible prior to death, nor do we know how long it should take for an animal to die.” She notes that the issues are the same, whether it’s an accident scene, disease control situation or part of responsible on-farm management.

The OIE (World Organization for Animal Health) defines death as the, “irreversible termination of brain activity as demonstrated by the loss of brain stem reflexes.” However, there are no guidelines for how soon death should follow after an animal is rendered insensible. Martin Appelt, CFIA Humane Transportation Specialist notes



that, “as a rule of thumb, the time interval between stunning and follow-up action that guarantees death – bleeding for example - should be as short as possible, **probably not exceeding one minute.**”

However, Appelt says that in the field, “You have no access to an EEG or ECG. You may have a hard time using a stethoscope, due to ambient noise (at an accident scene or during disease control operations). In addition, you are not sure what reflexes you should and should not expect. The animal now appears to be dead - but is it?”

Several guidelines for on-farm euthanasia have been developed but Woods says more is needed. “Existing on-farm euthanasia guidelines are generally paper guides with

simplistic illustrations, and ‘x’ marks the spot. There is no variation for different kinds of animals within a species.”

According to Woods, “the vast majority of livestock are euthanized by non-veterinarians. We need to give people information that will help them to ensure a humane death.”

Woods’ end goals are to develop:

- ✓ A captive bolt gun that kills (currently captive bolts are mainly used for stunning animals).
- ✓ A euthanasia training program on:
 - Determining when an animal should be killed;
 - Recommended killing methods for different species / situations;
 - Recognizing / determining death in the field or on-farm. ■



Captive bolt gun with extended bolts - being tested as a stand alone euthanasia tool